JOB SHEET

Stripcropping

Oklahoma Conservation Practice Job Sheet **585**

USDA Natural Resources Conservation Service (NRCS) **June, 2003**

Landowner_____

WHAT IS STRIPCROPPING?

Stripcropping is growing row crops, forages, small grains, or fallow in a systematic arrangement of equal width strips across a field.

PURPOSE

Stripcropping is used on sloping land where crops are grown to:

- Reduce soil erosion from water and transport of sediment and other water-borne contaminants
- Reduce soil erosion from wind
- Protect growing crops from damage by wind-borne soil particles

HOW IT HELPS THE LAND

Stripcropping is very effective at reducing wind erosion, as well as sheet and rill erosion. It is a low cost conservation practice and provides the opportunity to establish cropping system rotations. Stripcropping slows runoff from the land and increases water infiltration. This in turn increases moisture availability for crops improves fertilizer utilization and increases crop yields. Crop rotations can be designed to add diversity to the farming operation as well as break pest cycles that may have developed in monoculture operations.

WHERE THE PRACTICE APPLIES

Stripcropping is a conservation option for sloping cropland where sheet and rill erosion is a problem or in fields where wind erosion is a concern. Stripcropping may need to be used in combination with other conservation practices to achieve desired objectives.

WHERE TO GET HELP

For assistance in planning a stripcropping layout, contact your local Natural Resources Conservation Service or your local Conservation District office.

APPLYING THE PRACTICE

The width of the strips will need to be determined so that the erosion goal for the field is meeting. Keep in mind to try and install the width of the strips to best facilitate the operation of machinery. This will help to alleviate point rows.

The strips will be parallel to other on the field. Strips may be planted to annual crops or permanent

vegetation. However, the system works best when the erosion-resistant strip is permanent vegetation.

The strips in the system will be of equal widths. Soil loss from the field will not exceed the soil loss objective. Contact your local conservation office for help with designing strip widths.

Stripcropping for Water Erosion

Stripcropping works best on fields where the slope of the field is even and consistent. When the field has extreme slope changes from side to side, maintaining row grade will be difficult and may require correction strips. Stripcropping works well in reducing sheet and rill erosion but may not control ephemeral erosion. Fields with slopes of 2.5 % or greater begin to show evidence of ephemeral gully erosion. Additional practices such as terraces may be needed to control ephemeral gulley erosion on these fields.

Strip boundaries shall run parallel to each other and as close to the contour as practical to achieve the greatest erosion reduction, but still be practicable to equipment operation.

Strips need to be designed as close to the contour as possible so that the greatest erosion reduction can be achieved. All tillage and planting operations need to follow the contour established. Strips will be alternated down the slope starting with an erosion-susceptible strip followed by an erosion-resistant strip.

The erosion-susceptible strip shall not exceed 50% of the slope length used for erosion prediction or 150 ft. whichever is less.

When dealing with soils that have slow to very slow infiltration rates or crops which are sensitive to ponding water, row grades should be designed with not less than 2.5 inches per 100 ft. grade.

The maximum row grade should not exceed 5 percent or one-half the up and down hill slope percent, whichever is less.

The row ridge height should be at least 0.5 to 2.0 inches in height during the time of the year when the soil is most vulnerable to soil erosion. This is the time of the year when the most soil is exposed in the field. For example: September – October for wheat or May – June for corn, sorghum or soybeans.

The minimum ridge height is not required in no-till/strip-till systems applied on the contour if at least 50% surface residue is present after planting.

All runoff from stripcropping should be diverted to a stable outlet.

Stripcropping for Wind Erosion

Strips need to be oriented as close to perpendicular to the prevailing wind erosion direction as possible. In Oklahoma, strips designed in an east – west direction will provide adequate wind erosion protection.

When the erosion-resistant strips are used to protect growing crops from blowing soil, they will be planted to permanent vegetation to establish a stable area where saltating and creep particles from wind erosion are trapped and held. The width of the erosion-susceptible strip will not exceed the width permitted by the crop tolerance to wind erosion.

Stripcropping – Design Sheet

Purpose (Check all that apply)		
❑ Reduce soil erosion by water and transport of sediment and other water-born contaminants	❑ Reduce soil from wind erosion	❑ Protect growing crops from damage by wind-borne soil particles

Location and Layout	Width of Strips	Erosion-Susceptible Crop	Erosion-Resistant Crop
Field 1			
Field 2			

Management and Maintenance